



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs  
Registration Division (7505P)  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

EPA Reg. Number:

74530-86

Date of Issuance:

7/20/18

NOTICE OF PESTICIDE:

☒ Registration  
☐ Reregistration  
(under FIFRA, as amended)

Term of Issuance:

Conditional

Name of Pesticide Product:

Extreme Packaged by Helm

Name and Address of Registrant (include ZIP Code):

Bert Volger, Ph.D.  
Agent for Helm Agro US, Inc.  
c/o Ceres International, LLC  
1087 Heartsease Drive  
West Chester, PA 19382

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Reuben Baris, Product Manager 25  
Herbicides Branch, Registration Division (7505P)

Date:

7/20/18

2. You are required to comply with the data requirements described in the generic data call-in (GDCI) identified below:
  - a. Imazethapyr GDCI-128922-1549

You must comply with all the data requirements within the established deadlines. If you have questions about the GDCI listed above, you may contact the Chemical Review Manager in the Pesticide Reevaluation Division: <http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1>

3. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSF:

- Basic CSF dated 03/08/2018

If you have any questions, please contact Mindy Ondish by phone at 703-605-0723, or via email at [ondish.mindy@epa.gov](mailto:ondish.mindy@epa.gov).

Enclosure



# Extreme

## PACKAGED BY HELM

Glyphosate	Group	9	Herbicide
Imazethapyr	Group	2	Herbicide

**For use in soybeans, Roundup Ready soybeans, Clearfield® corn, and Roundup Ready® alfalfa**

**Active Ingredients:**

**Imazethapyr:** (±)-2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-3-pyridinecarboxylic acid . . . . . 1.80%

**Glyphosate:** N-(phosphonomethyl)glycine, in the form of its isopropylamine salt\* . . 22.00%

**Other Ingredients:** . . . . . 76.20%

**Total:** . . . . . 100.00%

Contains 2.17 pounds of active ingredient per gallon (0.17 pound acid equivalent of imazethapyr and 2 pounds of glyphosate as the isopropylamine salt)

\* 1.48 lbs glyphosate acid per gallon

**EPA Reg. No. 74530-86**

**EPA Est. No. xxxxx-xx-xxx**

## KEEP OUT OF REACH OF CHILDREN WARNING/AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

See inside for complete **First Aid, Precautionary Statements, Directions For Use, Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

For Chemical Emergency Assistance (Spill, Leak, Fire or Accident)  
call CHEMTREC at 1-800-424-9300

**Net Contents:** \_\_\_\_\_

**Manufactured For:**

HELM AGRO USA  
401 E. Jackson St., Suite 1400  
Tampa, FL 33602

**ACCEPTED**

**07/20/2018**

Under the Federal Insecticide, Fungicide  
and Rodenticide Act as amended, for the  
pesticide registered under  
EPA Reg. No. 74530-86

FIRST AID	
If in eyes	<ul style="list-style-type: none"><li>• Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes; then continue rinsing eyes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
If on skin or clothing	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
If swallowed	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• <b>DO NOT</b> induce vomiting unless told to by a poison control center or doctor.</li></ul>
<b>Note to Physician:</b> Probable mucosal damage may contraindicate the use of gastric lavage.	
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. For Chemical Emergency Assistance (Spill, Leak, Fire or Accident) call CHEMTREC at 1-800-424-9300.	

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## Precautionary Statements

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### Hazards to Humans and Domestic Animals

**WARNING.** Causes substantial but temporary eye injury. **DO NOT** get in eyes or on clothing. Harmful if absorbed through skin. Avoid contact with skin.

### Personal Protective Equipment (PPE)

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, made of butyl rubber  $\geq$  14 mils, or natural rubber  $\geq$  14 mils, or neoprene rubber  $\geq$  14 mils, or nitrile rubber  $\geq$  14 mils
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

### USER SAFETY RECOMMENDATIONS

**Users should:**

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

## Environmental Hazards

**DO NOT** apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwater or rinsate.

## Groundwater Advisory and Proper Handling Instructions

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

This product may not be mixed or loaded within 50 feet of any wells (including abandoned wells and drainage wells), sinkholes, perennial or intermittent streams and rivers, and natural or impounded lakes or reservoirs. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pad or properly diked mixing/loading areas.

Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or washwater, and rainwater that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times.

The above specific minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

**DO NOT** apply this product through any type of irrigation system.

Product must be used in a manner which will prevent back-siphoning in wells, spills or improper disposal of excess pesticide spray mixture.

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## Directions For Use

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It is a violation of federal law to use this product in a manner inconsistent with its labeling.

**DO NOT** apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

This label must be in the possession of the user at the time of herbicide application.

**Not for sale or use on Long Island, New York.**

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## AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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### AGRICULTURAL USE REQUIREMENTS *(continued)*

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**DO NOT** enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **48 hours**.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plant, soil, or water, is:

- Coveralls
- Protective eyewear
- Chemical-resistant gloves, made of butyl rubber  $\geq 14$  mils, or natural rubber  $\geq 14$  mils, or neoprene rubber  $\geq 14$  mils, or nitrile rubber  $\geq 14$  mils
- Shoes plus socks

## STORAGE AND DISPOSAL

**DO NOT** contaminate water, food, or feed by storage or disposal.

### Pesticide Storage

**Extreme Packaged by Helm** is stable under conditions of freezing and thawing. Shake well before using. Keep containers closed to avoid spills and contamination.

### Pesticide Disposal

Wastes resulting from the use of this product must be disposed of on-site or at an approved disposal facility.

### Container Handling

**Nonrefillable Container. DO NOT reuse or refill this container.** Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

**Triple rinse containers small enough to shake (capacity  $\leq$  5 gallons) as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

#### **Triple rinse containers too large to shake**

**(capacity > 5 gallons) as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

**Pressure rinse as follows:** Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**Refillable Container.** Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

**Triple rinse as follows:** To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

### In Case of Emergency

In case of large-scale spillage regarding this product, call:

- CHEMTREC 1-800-424-9300

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- CHEMTREC 1-800-424-9300

**Steps to be taken in case material is released or spilled:**

- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

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## Product Information

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**Extreme Packaged by Helm** provides burndown and residual control of many broadleaf and grass weeds in soybeans, **Roundup Ready®** soybeans, **Clearfield®** corn, and **Roundup Ready®** alfalfa. **Extreme Packaged by Helm** may be applied postemergence to **Roundup Ready** soybeans and **Roundup Ready** alfalfa for season-long weed control. **Extreme Packaged by Helm** is effective for difficult-to-control weeds common to no-till production, including marehail.

Occasionally, internode shortening and/or temporary yellowing of crop plants may occur following an **Extreme Packaged by Helm** application. These effects occur infrequently and are usually temporary.

**Extreme Packaged by Helm** is a mixture of two active ingredients: imazethapyr and glyphosate, which inhibit acetolactate synthase/acetohydroxyacid synthase (ALS/AHAS) and 5-enolpyruvylshikimate-3-phosphate synthase (EPSPS), respectively.

Weed populations may contain plants naturally resistant to various herbicide modes of action. Weed populations have been identified that are resistant to ALS/AHAS and/or EPSPS herbicides. Naturally occurring biotypes of some of the weeds listed on this label may not be effectively controlled by this and/or other products with either the ALS/AHAS and/or EPSPS modes of action. If resistant biotypes occur in the field, incorporate additional control methods for effective weed control such as additional approved herbicides with alternate modes of action or mechanical means.

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## Resistance Management

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For resistance management, please note that **Extreme Packaged by Helm** contains both a Group 9 (EPSP synthase inhibitor) and a Group 2 (ALS/AHAS inhibitor) herbicide. Any weed population may contain plants naturally resistant to Group 9 and/or Group 2 herbicides. The resistant individuals may dominate the weed population if these herbicides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance take one or more of the following steps:

- Rotate the use of **Extreme Packaged by Helm** or other Group 2 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled



by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage.

- Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- Contact your local Helm Agro representative or local extension office if weed resistance is suspected.

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## Application Information

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**Extreme Packaged by Helm** applied postemergence is effective in controlling weeds in conservation tillage as well as in conventional production systems. Apply **Extreme Packaged by Helm** to crops and weeds that are actively growing; base application timing on weed size and not crop growth stage.

A nonionic surfactant **AND** a nitrogen-based fertilizer must be added to the spray solution for optimum weed control. Apply NIS at 0.125% v/v of spray solution **AND** AMS at 2.5 lbs/A. See **Mixing Instructions** for directions.

When **Extreme Packaged by Helm** is applied postemergence, absorption will occur through both the roots and foliage. Susceptible weeds stop growing and either die or are not competitive with the crop. **Extreme Packaged by Helm** not only controls many existing broadleaf and grass weeds when applied postemergence, it also provides control of susceptible weeds that may emerge after application.

For maximum weed control where cultivation is possible, cultivate 7 to 10 days following a postemergence **Extreme Packaged by Helm** application to enhance residual weed control, especially under dry conditions.

Apply **Extreme Packaged by Helm** a minimum of 1 hour before rainfall or overhead irrigation.

Unusually cool temperatures (50°F or less) reduce photosynthesis and transpiration and, thus, reduce uptake, translocation, and weed control efficacy of **Extreme Packaged by Helm**.

If air temperature has been below 50°F for 10 or more hours, delay **Extreme Packaged by Helm** application for 48 hours after the temperature increases above 50°F to improve weed control and reduce crop response.

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## Mixing Instructions

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Burndown or postemergence applications of **Extreme Packaged by Helm** require the addition of a surfactant **AND** fertilizer.

### Surfactant

Use a nonionic surfactant containing at least 80% active ingredient. Apply the surfactant at 1 pint per 100 gallons of spray mixture (0.125% volume/volume of the spray mixture). Use only surfactants approved for application to growing crops.

### AND

### Fertilizer

Include a fertilizer in the spray solution. Add spray grade ammonium sulfate at 8.5 to 17 lbs per 100 gallons of spray solution. Use the higher rate when weeds are under moisture or temperature stress.

### Mixing Order

1. **Water** - Begin by agitating a thoroughly clean sprayer tank 1/2 full with clean water.
2. **Agitation** - Maintain continuous and constant agitation throughout.
3. **Fertilizer**

4. **Extreme Packaged by Helm** - Mix thoroughly.
5. **Surfactant**
6. **Remaining quantity of water**

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## Application Instructions

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**DO NOT** apply when winds are gusty, under low-level inversion conditions or under other conditions that favor drift. Maintain appropriate buffer zones between treated fields and adjacent desirable vegetation. Exposed leaves or other green tissue may be damaged or killed by drift from **Extreme Packaged by Helm**. Severe injury or plant death may result if the product contacts foliage of desirable plants. To prevent injury to desirable plants and crops, **DO NOT** allow spray drift to occur.

**DO NOT** allow the herbicide solution to drift onto desirable vegetation. Very small amounts of drift may cause injury or death to desirable crops or plants. The likelihood of injury from use of this product increases when winds are gusty. The risk of injury from this product increases when wind direction is constantly changing or during inversion conditions or other weather conditions that favor drift. Avoid applications using high spray pressure and high speed.

These contribute to conditions that favor small spray droplets and drift.

When **Extreme Packaged by Helm** is used in combination with another herbicide, refer to the respective label for rates, methods of application, proper timing, weeds controlled, restrictions and precautions. Always use in accordance with the more restrictive label restrictions and precautions. **DO NOT** exceed label dosages. **DO NOT** mix this product with any product containing a label prohibiting such mixtures.

To avoid injury to sensitive crops, drain spray equipment used for **Extreme Packaged by Helm** applications and thoroughly clean with water before applying other products.

### Drift Control Additives

Drift control additives may be included in either ground or aerial applications. When a drift control agent is used, read and carefully observe the precautionary statements and all other information appearing on the additive label.

### Ground Application

Uniformly apply with properly calibrated ground equipment in 10 or more gallons of water per acre. A spray pressure of 20 to 40 psi is recommended.

To ensure thorough coverage, use a minimum of 20 gallons of water per acre when applying **Extreme Packaged by Helm** to minimum or no-till crops. Use higher gallonage for fields with dense vegetation or heavy crop residues. Adjust the boom height to ensure proper coverage of weed foliage (according to the manufacturer's recommendation). Use only flat-fan nozzle tips for postemergence applications.

Avoid overlaps when spraying.

### Low-volume Spray Application

**Extreme Packaged by Helm** may be applied with a low-volume sprayer. When applying this product with a low-volume sprayer, spray the weeds before they reach the maximum size listed in this label. Weed control is dependent upon good spray coverage of the weeds. The sprayer must be calibrated to deliver the recommended spray volume and pressure to ensure adequate spray coverage of the weeds.

When applying **Extreme Packaged by Helm** with a low-volume sprayer, apply a minimum of 10 gallons per acre of spray solution with a nozzle pressure between 40 to 60 psi for optimum coverage. Lower nozzle pressure will minimize the potential for drift to desirable vegetation.

### Aerial Application

Uniformly apply with properly calibrated aerial equipment in 5 or more gallons of water per acre.

When applied **postemergence**, the addition of a nonionic surfactant **AND** fertilizer solution are required for optimum weed control. Apply nonionic surfactant (NIS) at 0.125% volume to volume (v/v) of spray solution **AND** ammonium sulfate (AMS) at 2.5 lbs/A. See **Postemergence** instructions in **Application Information** section.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-related and weather-related factors determines the potential for spray drift. The applicator and the grower are responsible

for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements **DO NOT** apply to forestry applications, public health uses, or to applications using dry formulations.

1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the airstream and never be pointed downward more than 45 degrees.

Observe more stringent state regulations, if applicable.

The applicator should be familiar with and take into account the information covered in the aerial drift reduction advisory information presented below.

## Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly or under unfavorable environmental conditions (see **Wind**; **Temperature and Humidity**; and **Temperature Inversions**).

### Controlling droplet size:

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - **DO NOT** exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** - Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid-stream nozzles oriented straight back produce the largest droplets and the lowest drift.

## Boom Length

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

## Application Height

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

## Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller droplets, etc.).

## Wind

Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential.

**NOTE:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

## Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

## Temperature Inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light, variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light-to-no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator.

Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

## Sensitive Areas

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, or nontarget crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

Applicator is responsible for any loss or damage which results from spraying **Extreme Packaged by Helm** in a manner other than specified in this label. In addition, applicator must follow all applicable state and local regulations and ordinances in regard to spraying.

## Soybeans

**DO NOT** apply **Extreme Packaged by Helm** postemergence to non-Roundup Ready® soybeans.

**North Dakota and north of Highway #210 in Minnesota only.** Apply **Extreme Packaged by Helm** at 2.25 pts/A.

One gallon of **Extreme Packaged by Helm** will treat 3.6 acres at this rate.

**DO NOT** exceed 2.25 pts/A per season.

## Burndown Weed Control Prior to Soybean Emergence (no-till and stale seedbed)

Apply **Extreme Packaged by Helm** at 3.0 pts/A for burndown of weeds in no-till soybeans. This product may be applied prior to planting or preemergence of any soybean variety (including **Roundup Ready** or non-**Roundup Ready** soybeans). Add 2,4-D to the spray tank for enhanced control of perennial weeds including horseweed/marestail and hemp dogbane. Tank mix with **Sharpen® herbicide** or **Verdict™ herbicide** prior to soybean planting/emergence to enhance the burndown speed and increase weed spectrum including glyphosate-resistant horseweed.

For season-long grass control and enhanced waterhemp control, apply **Prowl® H<sub>2</sub>O herbicide** prior to planting soybeans. A postemergence application of **Extreme Packaged by Helm** will control any escaped weeds and provide season-long control of most broadleaf and grass weeds. Apply this product postemergence only to **Roundup Ready** soybean. Postemergence applications of **Extreme Packaged by Helm** to non-**Roundup Ready** soybean will kill the soybean.

When organophosphate (such as chlorpyrifos) or carbamate insecticides are tank mixed with **Extreme Packaged by Helm**, temporary injury may result to the treated crop.

## In-crop Postemergence Weed Control in Roundup Ready Soybeans

**Extreme Packaged by Helm** may be applied for postemergence weed control in **Roundup Ready** soybeans. Apply **Extreme Packaged by Helm** for general weed burndown and season-long control of broadleaf and grass weeds.

To minimize weed competition, apply **Extreme Packaged by Helm** at 3.0 pts/A to weeds 1 to 8 inches high. One gallon of **Extreme Packaged by Helm** will treat 2.7 acres of soybeans at this rate.

## Fall Applications in a Planned Sequential Program

Apply **Extreme Packaged by Helm** at 3.0 pts/A after fall harvest and prior to ground freeze in the winter. Fall applications of **Extreme Packaged by Helm** will control existing weeds and provide residual control of winter annual weeds and early spring germinating weeds in soybeans. Soybeans must be planted in the spring following the fall application of **Extreme Packaged by Helm**. If weeds emerge in season, other registered soybean products may be

applied postemergence for weed control.

**NOTE:** For fall applications of **Extreme Packaged by Helm**, base the rotational crop intervals on the date of soybean planting, not the date of herbicide application.

### No-till/Minimum Tillage and Double Crop Soybeans

Apply **Extreme Packaged by Helm** at 3.0 pts/A. **Extreme Packaged by Helm** controls existing weeds and provides residual control of most weeds when applied early postemergence to **Roundup Ready** soybeans in no-till or minimum tillage and double crop soybean production systems. Apply **Extreme Packaged by Helm** before or after crop emergence. Only **Roundup Ready** soybeans can be treated after crop emergence. Refer to the **Weeds Controlled** chart for weeds controlled and specific weed size.

Tank mix **Prowl H<sub>2</sub>O** with **Extreme Packaged by Helm** for burndown weed control to provide season-long control of grass weeds and enhance control of waterhemp.

Tank mix **Sharpen** or **Verdict** to enhance burndown speed and increase weed spectrum including glyphosate- resistant horseweed.

For improved burndown weed control, **Extreme Packaged by Helm** may be tank mixed with 2,4-D. Refer to the 2,4-D label for application rates and intervals between application and planting.

### Soybean (Roundup and non-Roundup Ready)

#### Restrictions and Limitations

- **DO NOT** apply **Extreme Packaged by Helm** postemergence to non-Roundup Ready-resistant soybeans.
- **DO NOT** harvest soybeans for at least 85 days after **Extreme Packaged by Helm** application.
- **DO NOT** graze or feed treated soybean forage, hay or straw to livestock.
- If soybeans are furrow irrigated, till the soil prior to planting winter wheat or barley. Break up beds and mix the soil with tillage equipment set to cut 4 to 6 inches deep.
- Make **Extreme Packaged by Helm** applications before soybean bloom.
- Make only one application of **Extreme Packaged by Helm** per soybean growing season.
- **DO NOT** exceed 3.0 pts/A of **Extreme Packaged by Helm** per soybean growing season.
- **North Dakota; north of Highway #210 in Minnesota Only** - Apply **Extreme Packaged by Helm** at 2.25 pts/A.
- **DO NOT** exceed 2.25 pts/A per soybean growing season.

## Clearfield® Corn

**Fall or Spring Burndown Application in a Planned Sequential Program with Lightning® herbicide applied to Clearfield Corn**

**Kentucky and Tennessee; South of Interstate 70 in Indiana Only**

**Extreme Packaged by Helm** may be applied at 3.0 pts/A as a fall or spring burndown application prior to planting **Clearfield** corn and/or prior to using **Lightning** in-crop to **Clearfield** corn.

- **DO NOT** apply **Extreme Packaged by Helm** to emerged **Clearfield** corn or crop injury will occur.
- **DO NOT** apply **Counter® 15G** insecticide to preplant **Clearfield** corn acres treated with **Extreme Packaged by Helm** or crop injury can occur.
- **DO NOT** plant wheat in the same year as application of **Extreme Packaged by Helm** followed by **Lightning** unless at least 10 inches of rainfall or overhead irrigation has occurred between application of this product and wheat planting.



## Roundup Ready® Alfalfa

**Extreme Packaged by Helm** provides contact and residual control of many broadleaf and grass weeds in **Roundup Ready** alfalfa. **Extreme Packaged by Helm** can be applied postemergence to seedling or established **Roundup Ready** alfalfa or to dormant or semi-dormant established **Roundup Ready** alfalfa grown for forage, hay, or seed. **Roundup Ready** alfalfa is tolerant to postemergence applications of **Extreme Packaged by Helm**. This product, if applied to non-**Roundup Ready** alfalfa, will cause severe crop injury and crop loss.

Apply **Extreme Packaged by Helm** at a broadcast rate of 2.2 to 4.4 pts/A postemergence only to seedling or established **Roundup Ready** alfalfa grown for forage, hay, or seed. Allow a minimum of 7 days between sequential applications.

- **Maximum Seasonal Use Rate** - A maximum of 4.4 pts/A of **Extreme Packaged by Helm** (0.814 lb ae/A glyphosate, 0.094 lb ae/A imazethapyr) per year may be applied to **Roundup Ready** alfalfa.
- **DO NOT** apply more than 3.0 pts/A of **Extreme Packaged by Helm** to **Roundup Ready** alfalfa during the last year of the stand.

### Seedling Roundup Ready Alfalfa

**Extreme Packaged by Helm** must be applied postemergence to seedling

**Roundup Ready** alfalfa. Apply **Extreme Packaged by Helm** when the seedling **Roundup Ready** alfalfa is in the second trifoliolate stage or larger and when the majority of the weeds are 1 to 3 inches. For low growing weeds (such as mustards), apply **Extreme Packaged by Helm** before the rosette exceeds 3 inches.

Because of the biology and breeding constraints of alfalfa, up to 10% of the seedlings may not contain a **Roundup Ready** gene and will not survive or thrive after the first application of **Extreme Packaged by Helm**. To limit **Roundup Ready** gene, apply a single **Extreme Packaged by Helm** application of at least 3.0 pts/A at or before the 3 to 4 trifoliolate growth stage.

### Established Roundup Ready Alfalfa

**Extreme Packaged by Helm** can be applied to established **Roundup Ready** alfalfa in the fall, in the spring to dormant or semi-dormant **Roundup Ready** alfalfa (less than 3 inches of regrowth), or between cuttings. For weed control between alfalfa cuttings, apply **Extreme Packaged by Helm** following **Roundup Ready** alfalfa cutting and removal of the hay from the field. Make any application before significant **Roundup Ready** alfalfa growth or regrowth (3 inches) to allow **Extreme Packaged by Helm** to reach target weeds.

### Replanting

If replanting is necessary in a field previously treated with **Extreme Packaged by Helm**, **DO NOT** plant alfalfa for 4 months following an application of this product.

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### Roundup Ready Alfalfa Restrictions and Limitations

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- **DO NOT** apply **Extreme Packaged by Helm** at more than 3.0 pts/A in North Dakota or Minnesota north of Highway #210.
- **DO NOT** apply more than 3.0 pts/A of **Extreme Packaged by Helm** to **Roundup Ready** alfalfa during the last year of the stand.
- **Maximum Seasonal Use Rate** - A maximum of 4.4 pts/A of **Extreme Packaged by Helm** (0.814 lb ae/A glyphosate, 0.094 lb ae/A imazethapyr) per year may be applied to **Roundup Ready** alfalfa.
- **Preharvest Interval (PHI)** - **DO NOT** feed, graze, or harvest **Roundup Ready** alfalfa for 30 days following an application of this product to **Roundup Ready** alfalfa.

## Weeds Controlled

<b>Broadleaf weeds</b>	<b>Maximum size (inches)</b>
Alligator weed	5
Amaranth, Palmer *	4
Anoda, spurred	3
Bedstraw, catchweed	3
Beet, wild	5
Bristly starbur	3
Buckwheat, wild	4
Buffalobur	5
Burcucumber	8
Carpetweed	8
Chickweed	8
Cocklebur, common*	8
Copperleaf, hophornbeam	2
Copperleaf, Virginia	2

## Weeds Controlled (continued)

Broadleaf Weeds (continued)	Maximum Size (inches)
Corn, Volunteer	20
Eclipta	8
Fleabane, annual	8
Fleabane, hairy	8
Fleabane, rough	6
Flixweed	3
Hemp Sesbania	2
Horseweed/Marestail*	8
Jimsonweed	6
Knotweed	8
Kochia*	8
Lambsquarters, common*	8
Mallow, common	3
Mallow, little	3
Marshelder	5
Morningglory, annual <i>Ipomoea spp.</i>	4
Mustard spp.	8
Nightshade, black	8
Nightshade, Eastern black	8
Pennycress, field	NA
Pepperweed, field	NA
Pepperweed, Virginia	NA
Pigweed, redroot	8
Pigweed, smooth	8
Pigweed spiny	8
Radish, wild	3
Ragweed, common*	9
Ragweed, giant*	9
Rocket, London	4
Rocket, yellow	3
Shepherd's purse	8
Sicklepod	3
Smartweed, ladysthumb	6
Smartweed, Pennsylvania	6
Spurge, prostrate	8
Spurge, spotted	8
Sunflower	8
Teaweed/Prickly sida	2
Velvetleaf	5
Waterhemp*	8

## Weeds Controlled (continued)

Grass Weeds (continued)	Maximum Size (inches)
Barley, Volunteer	8
Barnyardgrass	6
Crabgrass, large	8
Crabgrass, smooth	8
Cupgrass, wooly	8
Foxtail, giant	8
Foxtail, green	8
Fopxtail, yellow	8
Goosegrass	5
Johnsongrass, rhizome*	8
Johnsongrass, seedling*	8
Oats, volunteer	8
Panicum, browntop	8
Panicum, fall	8
Panicum, Texas	8
<i>Red rice</i>	4
Shattercane	8
Signalgrass, broadleaf	8
Sorghum, alnum	4
Sprangletop	8
Wheat, volunteer	8
Wild oats	8

## SEDGES

	Maximum Size (inches)
Nutsedge, purple	3**
Nutsedge, yellow	3**

NA=Not Applicable

\*Populations of indicated weeds exist that are known to be resistant to ALS/AHAS-inhibiting and EPSPS- inhibiting herbicides and may not be effectively controlled with **Extreme Packaged by Helm**. In fields where these populations exist, incorporate additional control methods for effective weed control and include additional approved herbicides with alternate modes of action or mechanical means.

\*\*Reduced competition



## Rotational Crop Restrictions

The following rotational crops may be planted after applying **Extreme Packaged by Helm** at the specified rate. Planting earlier than the specified interval may result in crop injury.

**NOTE:** See **Exceptions To Rotational Crop Restrictions** following these guidelines.

CROP	MONTHS AFTER APPLICATION
<b>Clearfield®</b> corn seed hybrids (resistant/tolerant to <b>Pursuit®</b> herbicide)	Anytime
Lima Beans	Anytime
Peanuts	Anytime
Peas	Anytime
Southern Peas	Anytime
Soybeans	Anytime
Snapbeans	2
Barley (select states; see <b>Exceptions To Rotational Crop Restrictions</b> )	4
Rye (except in Minnesota north of highway 201)	4
Wheat (3 months after application east of I-35)	4
Alfalfa	4
<b>Clearfield®</b> wheat	4
Clover	4
Edible beans (other than lima beans)	4
Field corn grown for seed	8 ½
Field Corn	8 ½
Barley (except in North Dakota)	9 ½
Tobacco	9 ½
<b>Clearfield®</b> canola varieties (resistant/tolerant to <b>Pursuit®</b> herbicide)	12
Barley (North Dakota; see <b>Exceptions To Rotational Crop Restrictions</b> )	18
Rye in North Dakota and Minnesota north of highway 210	18
Cotton	18
Lettuce	18
Oats	18
Popcorn	18
Safflower	18
Sorghum	18
Sunflower	18
Sweet Corn	18
Flax	26

Potatoes	26
All crops not listed elsewhere in <b>Rotational Crop Restrictions</b> *	40

\* Following forty months after an **Extreme Packaged by Helm** application, and before planting any crop not listed elsewhere in the **Rotational Crop Restrictions**, a successful field bioassay must be completed.

The field bioassay consists of a test strip of the intended rotational crop planted across the previously treated field and grown to maturity. The test strip should include low areas and knolls and include variations in soil such as type and pH. If no crop injury is evident in the test strip, the intended rotational crop may be planted the following year.

Sugar beet production can be reduced when grown in soil conditions with a pH less than 6.5. If the field is limed to adjust pH prior to planting rotational crops not listed in the **Rotational Crop Restrictions**, apply the lime at least 12 months prior to planting the rotational crop.

Use of **Extreme Packaged by Helm** in accordance with label directions is expected to result in normal growth of rotational crops in most situations; however, various environmental and agronomic factors make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible.

## Exceptions To Rotational Crop Restrictions

### Barley

**Delaware, Indiana, Kentucky, Maryland, New Jersey, Ohio, Pennsylvania, and Virginia only.** Barley may be planted **4 months** following an **Extreme Packaged by Helm** application in these states.

### Barley

**North Dakota only.** Barley may be planted **18 months** following an **Extreme Packaged by Helm** application in North Dakota.

### Corn Inbred Lines

Corn inbred seed lines may be planted the year following an application of **Extreme Packaged by Helm**. Several seed companies have tested a wide range of inbreds for sensitivity to **Extreme Packaged by Helm** soil residues and have reported good crop safety. However, due to the proprietary nature of seed production, HELM has not been given access to the inbred data.

Growers are directed to contact the seed company for information and recommendations regarding planting corn grown for seed in fields treated with **Extreme Packaged by Helm** the previous year. Since growing conditions, environmental conditions and grower practices are beyond the control of HELM, **ALL RISKS AND CONSEQUENCES ASSOCIATED WITH PLANTING SEED CORN INBREDS INTO FIELDS TREATED PREVIOUSLY WITH Extreme Packaged by Helm SHALL BE ASSUMED BY THE USER.**

### Sweet Corn And Popcorn Varieties

**Illinois, Indiana, Iowa, Minnesota, Ohio, Tennessee, and Wisconsin only.** Sweet corn and popcorn varieties may be planted the year following an application of **Extreme Packaged by Helm**. Some sweet corn and popcorn varieties may be injured when planted at less than 18 months following an application of **Extreme Packaged by Helm**. Before planting sweet corn for processing, contact the processor company for information and guidance regarding the tolerance of sweet corn varieties planned for fields treated with **Extreme Packaged by Helm** the previous year.

**DO NOT** plant fresh market sweet corn varieties prior to 18 months after **Extreme Packaged by Helm** use.

Before planting popcorn, contact the popcorn company for information and guidance regarding the tolerance of popcorn varieties planned for fields treated with **Extreme Packaged by Helm** the previous year.

Since growing conditions, environmental conditions and grower practices are beyond the control of HELM, **ALL RISKS AND CONSEQUENCES ASSOCIATED WITH PLANTING SWEET CORN OR POPCORN VARIETIES INTO FIELDS TREATED PREVIOUSLY WITH Extreme Packaged by Helm SHALL BE ASSUMED BY THE USER.**

Stunting and maturity delay or other adverse effects may result when sweet corn or popcorn are planted following **Extreme Packaged by Helm** use.

### Select Crops

**Alabama, Delaware, Florida, Georgia, Kentucky, Indiana, Maryland, New Jersey, North Carolina, Pennsylvania, South Carolina, and Virginia only.** The following crops may be planted 18 months following the last application of **Extreme Packaged by Helm**:

Bahiagrass, cabbage, cantaloupe, cucumber, Irish potato, onion, sweet pepper transplants, sweet potato transplants, tomato transplants, and watermelon.

### Wheat

Wheat may be planted **3 months** following an **Extreme Packaged by Helm** application in areas east of Interstate Highway I-35.

**Non-Clearfield® Wheat in North Dakota  
Rotational Interval based on pH, Moisture and Tillage**

pH and Rainfall Requirements	Moldboard Plowing	Rotational Interval (months)
>10 inches R+I AND pH >6.2	No	4
	Yes	4
<10 inches R+I OR pH <6.2	No	15
	Yes	4

**R+I** = Rainfall and overhead irrigation from the time of **Extreme Packaged by Helm** application up until time of wheat planting. **Does not include furrow or flood irrigation.**

If the rainfall or pH requirements are not fully met, and non-**Clearfield** wheat is planted prior to the specified rotation interval, injury may be reduced by tillage, such as deep disking (greater than 6 inches deep) after crop harvest but prior to November 1.

The possibility of injury to non-**Clearfield** wheat planted the next season increases if less than normal precipitation occurs within the first two months after **Extreme Packaged by Helm** application.

## LIMITATIONS OF WARRANTY AND LIABILITY

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

Follow Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Helm Agro US, Inc. or Seller. To the extent of applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Helm and Seller harmless for any claims relating to such factors.

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